

## **MODS Productivity Data**

### **I. PREFACE**

#### **A. Purpose and Content**

USPS-FY13-23 provides FY2013 productivity data for selected operations at plants, Network Distribution Centers (NDCs, formerly Bulk Mail Centers or BMCs), and Remote Encoding Centers (RECs).

#### **B. Predecessor Documents**

Docket No. R2006-1, USPS-LR-L-56, Part III.  
Docket No. ACR2007, USPS-FY07-23.  
Docket No. ACR2008, USPS-FY08-23.  
Docket No. ACR2009, USPS-FY09-23.  
Docket No. ACR2010, USPS-FY10-23.  
Docket No. ACR2011, USPS-FY11-23.  
Docket No. ACR2012, USPS-FY12-23.

#### **C. Corresponding Non-Public Document**

There is no corresponding non-public document.

#### **D. Methodology**

The productivities for plant and NDC operations employ data from the Management Operating Data System (MODS) processed using the methodology from Docket No. R2006-1, USPS-LR-L-56, Part III, as modified in Docket No. RM2012-2, Proposals Sixteen and Seventeen (approved in Commission Order No. 1383). Productivities for Remote Encoding Center (REC) operations are based on image volumes and console hours from the WebROADS system, adjusted for "overhead" workhours included in the MODS workhour total.

Carrier Sequence Barcode Sorter (CSBCS) productivity is calculated using the methodology described in Docket No. RM2010-5, Proposal Twenty-Seven (approved in Postal Regulatory Commission Order No. 394). The last CSBCS equipment was withdrawn from service at the end of FY2013, so there will be no end-of-run data with which to update the CSBCS calculation in FY2014.

USPS-FY13-23 also provides an alternative version of the plant productivity spreadsheet, YRscrub2013.Prop8.xlsx, reflecting changes to productivity reporting for certain operation groups proposed in Docket No. RM2014-1, Proposal Eight. These modifications consolidate operation groups for manual letters, manual flats, and UFSM 1000 activities; add productivity measures for

outgoing and incoming mechanized tray sorting operations; and eliminate some operation groups that are unused and/or no longer are associated with active MODS operations.

#### **E. Input/Output**

The productivity data are used in USPS-FY13-10, USPS-FY13-11, and USPS-FY13-15. Additionally, the console hours used to develop the REC productivities are used in USPS-FY13-7 to assign LDC 15 REC labor costs to cost pools. Seven.

## **II. ORGANIZATION**

The productivity data are presented in the Microsoft Office Excel workbooks 'YRScrub2013.xlsx', 'NDCscrub2013.xlsx', 'RECProds2013.xlsx', and 'CSBCS2013.xlsx'.

**Table 1. MODS Productivities for Selected Plant Operations**

<b>Group</b>	<b>Description</b>	<b>Shape</b>	<b>TPF/Hour</b>	<b>TPH/TPF</b>
4	LMLM & LCREM	Letters	2,048	1.000
7	Out BCS Primary	Letters	7,974	0.970
8	Out BCS Secondary	Letters	8,167	0.984
9	In BCS MMP	Letters	5,708	0.985
10	In BCS SCF/Primary	Letters	6,409	0.983
11	In BCS Secondary (1 Pass)	Letters	5,898	0.978
12	In BCS Secondary (2 Pass)	Letters	8,919	0.992
14	Manual Out Primary	Letters	696	1.000
15	Manual Out Secondary	Letters	1,130	1.000
16	Manual In MMP	Letters	1,202	1.000
17	Manual In SCF/Primary	Letters	1,088	1.000
18	Manual In Secondary	Letters	433	1.000
21	AFSM100 Out Primary	Flats	1,590	0.972
22	AFSM100 Out Secondary	Flats	2,293	0.973
23	AFSM100 In MMP	Flats	1,606	0.978
24	AFSM100 In SCF	Flats	1,708	0.980
25	AFSM100 In Primary	Flats	1,376	0.980
26	AFSM100 In Secondary	Flats	1,709	0.980
27	AFSM100 ATHS Out Primary	Flats	2,284	0.972
28	AFSM100 ATHS Out Secondary	Flats	1,144	0.976
29	AFSM100 ATHS In MMP	Flats	1,847	0.980
30	AFSM100 ATHS In SCF	Flats	1,718	0.980
31	AFSM100 ATHS In Primary	Flats	1,551	0.979
32	AFSM100 ATHS In Secondary	Flats	2,004	0.980
33	AFSM100 AI Out Primary	Flats	3,162	0.970
34	AFSM100 AI Out Secondary	Flats	3,060	0.953
35	AFSM100 AI In MMP	Flats	1,972	0.978
36	AFSM100 AI In SCF	Flats	1,983	0.979
37	AFSM100 AI In Primary	Flats	1,854	0.973
38	AFSM100 AI In Secondary	Flats	2,644	0.981
39	AFSM100 ATHS/AI Out Primary	Flats	5,436	0.967
40	AFSM100 ATHS/AI Out Secondary	Flats	6,103	0.966
41	AFSM100 ATHS/AI In MMP	Flats	5,018	0.974
42	AFSM100 ATHS/AI In SCF	Flats	4,734	0.975
43	AFSM100 ATHS/AI In Primary	Flats	4,700	0.970
44	AFSM100 ATHS/AI In Secondary	Flats	4,256	0.974
45	UFSM1000 HSF Out Primary	Flats	1,530	0.854
46	UFSM1000 HSF Out Secondary	Flats	1,026	0.945
47	UFSM1000 HSF In MMP	Flats	2,037	0.920
48	UFSM1000 HSF In SCF	Flats	1,541	0.942
49	UFSM1000 HSF In Primary	Flats	na	na
50	UFSM1000 HSF In Secondary	Flats	2,171	0.938
51	UFSM1000 Key Out Primary	Flats	450	0.969
52	UFSM1000 Key Out Secondary	Flats	656	0.980

53	UFSM1000 Key In MMP	Flats	na	na
54	UFSM1000 Key In SCF	Flats	2,566	0.964
55	UFSM1000 Key In Primary	Flats	295	0.979
56	UFSM1000 Key In Secondary	Flats	896	0.974
57	Manual Out Primary	Flats	603	1.000
58	Manual Out Secondary	Flats	538	1.000
59	Manual In MMP	Flats	762	1.000
60	Manual In SCF	Flats	564	1.000
61	Manual In Primary	Flats	502	1.000
62	Manual In Secondary	Flats	180	1.000
63	Manual In	Parcels	293	1.000
64	SPBS Outgoing	Parcels	397	0.917
65	SPBS Incoming	Parcels	232	0.898
66	LIPS Outgoing	Parcels	na	na
67	LIPS Incoming	Parcels	298	1.000
68	APPS Outgoing	Parcels	595	0.884
69	APPS Incoming	Parcels	350	0.892
70	Manual Outgoing	Parcels	340	1.000
71	ISS - RETURN TO SENDER	Letters	717	0.009
72	OSS - RETURN TO SENDER	Letters	26,639	0.881
75	PARS WASTE MAIL	Letters	2,805	1.000
76	PARS MANUAL DISTRIBUTION	Letters	2,761	1.000
77	CIOSS RTS IMAGE LIFT MODE	Letters	6,547	0.937
78	CIOSS INTERCEPT LABEL MODE	Letters	7,330	0.933
79	CIOSS FORWARDS IMAGE LIFT MODE	Letters	6,640	0.956
80	CIOSS REVERSE SIDE SCAN	Letters	6,786	0.952
81	CIOSS RESCAN MODE	Letters	5,377	0.973
82	CIOSS OTHER MODE	Letters	5,652	0.884
83	CIOSS INTERCEPT IMAGE LIFT MODE	Letters	7,521	0.966
84	CIOSS FORWARDS LABEL MODE	Letters	7,411	0.875
85	CIOSS RTS LABEL MODE	Letters	7,406	0.812
86	FSS	Flats	798	0.904

Source: USPS-FY13-23, YRscrub2013.xlsx

**Table 2. MODS Productivities for Selected NDC Operation Groups**

Group	Total TPF	Total TPH	Total Hours	TPF/Hour
PPSM	287,343,298	277,713,725	1,096,682	262
SPSM	728,819,269	692,415,030	2,294,111	318
SSM	36,832,726	33,505,735	347,426	106
NMO/Manual Parcels	45,860,061	45,857,012	824,553	56
Outgoing Pouching	43,491,554	43,491,554	132,562	328

Source: USPS-FY13-23, NDCscrub2013.xlsx

**Table 3. Remote Encoding Center Productivities**

Product	Images Keyed	Console Hours	Productivity (images per console hour)	Productivity Adjusted for Overhead
APPS	355,711,692	338,505	1,051	915
Flats	536,475,640	508,203	1,056	919
Letters	245,989,592	226,962	1,084	944
COA	33,055,089	187,893	176	153
PARS	878,604,667	715,257	1,228	1,070
<b>Total</b>	<b>2,049,836,680</b>	<b>1,976,820</b>	<b>1,037</b>	<b>903</b>

Source: USPS-FY13-23, RECprods2013.xlsx

**Table 4. CSBCS Productivity**

Row	Description	Value
1	CSBCS tallies, machine running - LD41 pool	1,367
2	CSBCS tallies, machine running - Non-MODS	1,178
3	CSBCS tallies, total excluding overhead - LD41	1,454
4	CSBCS tallies, total excluding overhead - Non-MODS	1,647
5	Total tallies, LD41 pool	15,614
6	Break/clocking tallies, LD41 pool	1,867
7	LD41 pool overhead factor	1.1358
8	Non-MODS ovh6521 factor	1.1129
9	Non-MODS ovh6522 factor	1.0152
10	Non-MODS overhead factor	1.1298
11	Ratio of Total Time to Runtime, LD41 pool	1.2076
12	Ratio of Total Time to Runtime, Non-MODS	1.5794
13	Weighted Average Ratio	1.3797
14	Productivity adjustment factor	0.7248
15	Unadjusted runtime productivity	24,375
16	Adjusted CSBCS productivity	17,667

Source: USPS-FY13-23, CSBCS2013.xlsx

### III. PROGRAM DOCUMENTATION

#### A. Mail Processing Plant Productivities

Program: **modsprod.f** – FORTRAN program that creates a text file of MODS TPH, TPF, and hours by operation groups.

Input: **scrubmap13.prn** - Map of MODS operations to operation groups

**finlist13.s** - Sorted list of 2013 BA 1 Finance numbers and their facility IDs

**bmclist** – List of NDCs and ASFs

**vvpositions** - List of the facility IDs

**mods2013bymonth.txt** - Monthly GFY 2013 MODS TPF, TPH, and workhour data by month, finance number, and operation

Output: **TPH13.reg** - GFY 2013 MODS TPH by operation group, facility, and month

**TPF13.reg** - GFY 2013 MODS TPF by operation group, facility, and month

**HRS13.reg** - GFY 2013 MODS workhours by operation group, facility, and month

The MODS operation groups are as follows:

<u>Group</u>	<u>Description</u>	<u>Shape</u>	<u>Group</u>	<u>Description</u>	<u>Shape</u>
1	Out ISS Primary and Secondary	Letters	44	AFSM100 ATHS/AI In Secondary	Flats
2	In ISS Primary and Secondary	Letters	45	UFSM1000 HSF Out Primary	Flats
3	REC Keying	Letters	46	UFSM1000 HSF Out Secondary	Flats
4	LMLM and LCREM	Letters	47	UFSM1000 HSF In MMP	Flats
5	Out OSS Primary and Secondary	Letters	48	UFSM1000 HSF In SCF	Flats
6	In OSS Primary and Secondary	Letters	49	UFSM1000 HSF In Primary	Flats
7	Out BCS Primary	Letters	50	UFSM1000 HSF In Secondary	Flats
8	Out BCS Secondary	Letters	51	UFSM1000 Key Out Primary	Flats
9	In BCS MMP	Letters	52	UFSM1000 Key Out Secondary	Flats
10	In BCS SCF/Primary	Letters	53	UFSM1000 Key In MMP	Flats
11	In BCS Secondary (1 Pass)	Letters	54	UFSM1000 Key In SCF	Flats
12	In BCS Secondary (2 Pass)	Letters	55	UFSM1000 Key In Primary	Flats
13	In BCS Secondary (3 Pass)	Letters	56	UFSM1000 Key In Secondary	Flats
14	Manual Out Primary	Letters	57	Manual Out Primary	Flats
15	Manual Out Secondary	Letters	58	Manual Out Secondary	Flats
16	Manual In MMP	Letters	59	Manual In MMP	Flats
17	Manual In SCF/Primary	Letters	60	Manual In SCF	Flats
18	Manual In Secondary	Letters	61	Manual In Primary	Flats
19	Rifle Letters	Letters	62	Manual In Secondary	Flats
20	Flats VCS Keying	Flats	63	Manual In	Parcels
21	AFSM100 Out Primary	Flats	64	SPBS Outgoing	Parcels
22	AFSM100 Out Secondary	Flats	65	SPBS Incoming	Parcels
23	AFSM100 In MMP	Flats	66	LIPS Outgoing	Parcels
24	AFSM100 In SCF	Flats	67	LIPS Incoming	Parcels
25	AFSM100 In Primary	Flats	68	APPS Outgoing	Parcels
26	AFSM100 In Secondary	Flats	69	APPS Incoming	Parcels
27	AFSM100 ATHS Out Primary	Flats	70	Manual Outgoing	Parcels
28	AFSM100 ATHS Out Secondary	Flats	71	ISS - RETURN TO SENDER	Letters
29	AFSM100 ATHS In MMP	Flats	72	OSS - RETURN TO SENDER	Letters
30	AFSM100 ATHS In SCF	Flats	73	COA FORMS KEYING	COA
31	AFSM100 ATHS In Primary	Flats	74	PARS IMAGE KEYING	Letters
32	AFSM100 ATHS In Secondary	Flats	75	PARS WASTE MAIL	Letters
33	AFSM100 AI Out Primary	Flats	76	PARS MANUAL DISTRIBUTION	Letters
34	AFSM100 AI Out Secondary	Flats	77	CIOSS RTS IMAGE LIFT MODE	Letters
35	AFSM100 AI In MMP	Flats	78	CIOSS INTERCEPT LABEL MODE	Letters
36	AFSM100 AI In SCF	Flats	79	CIOSS FORWARDS IMAGE LIFT MODE	Letters
37	AFSM100 AI In Primary	Flats	80	CIOSS REVERSE SIDE SCAN	Letters
38	AFSM100 AI In Secondary	Flats	81	CIOSS RESCAN MODE	Letters
39	AFSM100 ATHS/AI Out Primary	Flats	82	CIOSS OTHER MODE	Letters
40	AFSM100 ATHS/AI Out Secondary	Flats	83	CIOSS INTERCEPT IMAGE LIFT MODE	Letters
41	AFSM100 ATHS/AI In MMP	Flats	84	CIOSS FORWARDS LABEL MODE	Letters
42	AFSM100 ATHS/AI In SCF	Flats	85	CIOSS RTS LABEL MODE	Letters
43	AFSM100 ATHS/AI In Primary	Flats	86	FSS	Flats

Program: **loadscrub.tsp** – TSP program that loads MODS operation group data by facility into a TSP dataset

Input: **TPH13.reg** - GFY 2013 MODS TPH by operation group, facility, and month

**TPF13.reg** - GFY 2013 MODS TPF by operation group, facility, and month

**HRS13.reg** - GFY 2013 MODS workhours by operation group, facility, and month

Output: **REGMODS13** - Panel data set containing GFY 2013 MODS data by facility, month, and operation group

Program: **yr\_scrub.tsp** – TSP program that calculates productivities (TPF/Hour) for each of the operation groups. MODS observations in the input data are by facility, month, and operation group. First, observations with TPH greater than TPF have TPF set equal to TPH.<sup>1</sup> Observations with zero TPF or zero workhours are eliminated as erroneous. The observation-level productivity is calculated on the remaining observations with nonzero TPF and nonzero workhours. Observations in the top and bottom one percent tails of the productivity distribution are eliminated as outliers. Finally, TPF, TPH, and workhours are summed by group for observations remaining after the screening steps. The productivity is the ratio of the sum of screened TPF to the sum of screened workhours. A plain-text output file is created for subsequent importation into the YRscrub2012.xls Excel spreadsheet. Productivities for groups 3, 20, 73, and 74 (REC productivities) are obtained from REC operating data reported in the WebROADS system, and thus are not reported in the spreadsheet; see Section C, below.

Input: **REGMODS13** - Panel data set containing GFY 2013 MODS data by facility, month, and operation group

Output: **yr\_scrub13.txt** – Text file with productivities for 86 operation groups, incorporated in **YRscrub2013.xls**.

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<sup>1</sup> This step edits a small number of anomalous observations for automated operations, where in principle TPF should always exceed TPH. Its main function is to allow subsequent productivity calculations to use the TPF variable for all operation groups, rather than to have separate but conceptually equivalent calculations for automated operations and for manual operations (for which MODS TPF is identically zero).



## B. NDC Productivities

Program: **bmcprod.f** – FORTRAN program that creates a text file of Network Distribution Center (NDC) MODS TPH, TPF, and workhours for the following operation groups: PPSM, SPSM, SSM, NMO/Manual Parcels, and Outgoing Pouching.

Input: **bmcops13.prn** - Map of MODS operations to 4 NDC operation groups  
**bmclist** – List of NDCs and ASFs  
**mods2013bymonth.txt** - Monthly GFY 2013 downloaded operation and Finance number-level MODS TPH, TFP, and hours

Output: **TPHMO13.bmc** - GFY 2013 MODS TPH by NDC operation group, NDC, and month  
**TPFMO13.bmc** - GFY 2013 MODS TPF by NDC operation groups NDC, and month  
**HRSMO13.bmc** - GFY 2013 MODS hours by NDC operation groups, NDC, and month

The 5 BMC operation groups are as follows:

Group	Description
1	Primary PSM (PPSM)
2	Secondary PSM (SPSM)
3	SSM
4	NMO/Manual Parcels
5	Outgoing Pouching

Program: **loadbmc.tsp** – TSP program that loads MODS operation group data by NDC into a TSP dataset

Input: **TPHMO13.bmc** - GFY 2013 MODS TPH by operation group, NDC, and month  
**TPFMO13.bmc** - GFY 2013 MODS TPF by 5 operation groups, NDC, and month  
**HRSMO13.bmc** - GFY 2013 MODS hours by 5 operation groups, NDC, and month

Output: **BMCMODS13** - Panel data set containing GFY 2013 MODS data by BMC month, and the 5 operation groups

Program: **bmc\_scrub.tsp** – TSP program that calculates NDC productivities (TPF/Hour) by operation group. The data screening procedures are identical to those described above for program yr\_scrub.tsp. A

text file is created that is imported into the NDCscrub2013.xls Excel spreadsheet.

Input: **BMCMODS13** - Panel data set containing GFY 2013 MODS data by NDC, month, and the operation group

Output: **bmc\_scrub13.txt** – Text file with productivities for the NDC operation groups, imported into **NDCscrub2012.xls**.

### C. REC Productivities

Spreadsheet: **RECprods2013.xls** – Excel spreadsheet containing Remote Encoding Center (REC) productivities for APPS, Flat, Letter, COA, and PARS images for GFY 2013. Productivities calculated from WebROADS images and console hours are adjusted for overhead using MODS hours.

### D. CSBCS Productivity

Spreadsheet: **CSBCS2013.xls** – Excel spreadsheet containing GFY 2013 CSBCS productivity. Throughput rates are calculated from the FY2013 CSBCS Machine Utilization Report, and adjusted using IOCS data as described in Docket No. RM2010-5, Proposal Twenty-Seven.